

IDENTIFICATION AND MANAGEMENT OF A TRANSFUSION REACTION

Type of Reaction	Incidence/Treatment	Signs and Symptoms	Etiology
Febrile (Non-Hemolytic)	<ul style="list-style-type: none"> • Most common type of reaction (1:200-1:100) • Usually occurs in patients with a history of previous transfusions or pregnancies • Premedication with acetaminophen 	<ul style="list-style-type: none"> • Rise in temperature 1C above baseline, rigors • Headache, malaise, vomiting 	<ul style="list-style-type: none"> • Antibody to donor leukocytes • Accumulated cytokines in component bag • Occurs in 1-2% of transfusions.
Acute Hemolytic Reaction (immediate)	<ul style="list-style-type: none"> • Treatment is aimed primarily at prevention of renal failure (IV fluids and diuretics) • Incidence is 1:33,000-1:12,000 	<ul style="list-style-type: none"> • Acute onset of symptoms(often within the first 15 minutes) • Fever, chills • Hemoglobinuria, renal failure, hypotension, DIC, oliguria, oozing from IV site., back pain, pain along infusion vein 	<p>Due to administration of incompatible blood:</p> <ol style="list-style-type: none"> 1. Crossmatch error. 2. Wrong identification of blood specimen. 3. Blood administered to wrong patient.
Delayed Hemolytic Reaction	<ul style="list-style-type: none"> • Incidence is 1:11,000-1:5,000 • Occur more often in patients with a history of multiple transfusions or pregnancies. • Transfuse with antigen negative rbc's as necessary 	<ul style="list-style-type: none"> • Weakness, unexplained fall in posttransfusion hemoglobin, elevated sserum bilirubin 	<p>Immune response to rbc antigens</p>
Circulatory Overload	<ul style="list-style-type: none"> • Incidence is 1:10,000-1:100 • Head of bed should be kept elevated. • Oxygen and diuretics may be ordered. 	<ul style="list-style-type: none"> • Dyspnea, orthopnea, productive cough with pink, frothy sputum, tachycardia, hypertension, headache. 	<p>Volume overload.</p>
Bacterial contamination	<ul style="list-style-type: none"> • Incidence is 1:1700 in pooled platelet units and 1:500,000 in red cell components • Treatment of shock, renal failure and DIC • Antibiotics 	<ul style="list-style-type: none"> • Fever, shock, disseminated intravascular coagulation (DIC) 	<p>Bacteria originating from:</p> <ol style="list-style-type: none"> 1. The donor venipuncture site or 2. Donor with an undiagnosed bacteremia 3. Proliferation during storage
Allergic Reaction	<ul style="list-style-type: none"> • Incidence is 1:100-1:33 • Antihistamines 	<ul style="list-style-type: none"> • Pruritis, rash, urticaria, flushing 	<p>Antibody to donor plasma proteins.</p>
Anaphylactic	<ul style="list-style-type: none"> • Incidence is 1:170,000-1:18,000 • Epinephrine • Antihistamines 	<ul style="list-style-type: none"> • Urticaria,erythema, anxiety, respiratory distress, hypotension, laryngeal /pharyngeal edema, bronchospasm 	<p>Antibody to donor plasma proteins.</p>
Transfusion Related Acute Lung Injury (TRALI)	<ul style="list-style-type: none"> • Incidence unknown but thought to occur as often as 1:5000 • Treat acute respiratory distress (oxygen therapy/ventilatory support) 	<ul style="list-style-type: none"> • Shortness of breath, hypoxemia, chills, fever, cyanosis, and hypotension • Xray findings consistent with pulmonary edema but with no evidence of cardiac failure 	<p>Transfused antibodies to HLA or white cell antigens which may react with recipients leukocytes.</p>